

U.S. Patent Application No. 09/736,820  
Amendment dated July 11, 2005  
Reply to Office Action dated April 13, 2005

**REMARKS/ARGUMENTS**

Reconsideration and continued examination of the above-identified application are respectfully requested.

The amendment to the claims is editorial in nature and does not alter the scope of the claims. Therefore, the amendment is not made for patentability reasons. Full support for the amendment can be found throughout the present application as originally filed, for instance, at page 1, lines 9 - 10 of the specification and in claim 1 as originally filed. Accordingly, no questions of new matter should arise.

**Rejection of claim 5 under 35 U.S.C. §112, second paragraph**

At page 2 of the Office Action, the Examiner rejected claim 5 under 35 U.S.C. §112, second paragraph, as lacking antecedent basis for the recitation of a "thermoplastic" plank. Claim 1 is amended herein to recite a polymeric plank, which is the term used in independent claim 1. The scope of the claim remains the same. Accordingly, the rejection should be withdrawn.

**Rejection of claims 1 - 2, 4 - 6, 19, 22 - 23 and 27 under 35 U.S.C. §103(a) over Park et al. in view of Skinner**

At page 3 of the Office Action, the Examiner rejected claims 1 - 2, 4 - 6, 19, 22 - 23 and 27 under 35 U.S.C. §103(a) as obvious over Park et al. (U.S. Patent No. 5,837,343) in view of Skinner (U.S. Patent No. 4,087,400). The Examiner alleged that Park et al. discloses a floor surface comprising polymeric planks having edges where the planks are connected to each other by a spline, discloses that the polymeric flooring plank is in the shape of a tile, and discloses that

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the flooring plank has a polymeric core with a laminate affixed on the surface of the core. The Examiner acknowledges that Park et al. fails to disclose that the planks are connected to each other by a chemical welding agent. The Examiner alleges that Skinner teaches that sections of vinyl flooring are sealed together in a closely abutting relation and wherein the sealing composition is tetrahydrofuran and 5 - 60% of an organic solvent. The Examiner alleged that it would have been obvious to provide Park et al. with a welding agent that is present on at least one edge of each thermoplastic plank that is connected together, a welding agent present on opposite edges of each individual plank and a welding agent consisting essentially of tetrahydrofuran in order to improve the process of joining together sections of the vinyl flooring as alleged taught by Skinner. For the following reasons, this rejection is respectfully traversed.

As thoroughly explained in Applicants' response of March 28, 2005, Park et al. explicitly states that the segments of its composite structure are assembled without additional bonding means such as nails or glue, thereby teaching away from any other means of bonding between its segments other than its described groove and spline assembly. Moreover, as thoroughly explained in Applicants' response of August 6, 2003, Skinner relates to joining sections of sheets of flexible vinyl flooring having a high gloss polyurethane wear layer by first placing the sections to be joined in closely abutting relationship to form an unsealed seam between the sections and then applying a seam sealing composition to the seam and curing the sealing composition to produce a welded seam. The Examiner has not shown any motivation to apply any chemical welding or bonding agent to the structure of Park et al., since Park et al. explicitly states that the segments of its composite structure are assembled without nails or glue, which would teach that the segments are joined without any additional form of bonding. Moreover, a person skilled in the art would

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not find the teachings in Skinner relating to joining flexible vinyl flooring to have relevance to the problem of joining rigid polymeric flooring planks. The flooring materials are quite different. Also, vinyl is chemically quite different from the polymer of Park et al., which is preferably polyethylene. The above-noted previous responses are incorporated in their entirety herein. Accordingly, this rejection should be withdrawn.

**Rejection of claim 3 under 35 U.S.C. §103(a) over Park et al. in view of Peralt Anstalt**

At page 4 of the Office Action, the Examiner rejected claim 3 under 35 U.S.C. §103(a) as obvious over Park et al. in view of Peralt Anstalt (GB 1,178,565). The Examiner alleged that Park et al. discloses the floor surface described above. The Examiner acknowledged that Park et al. fails to disclose a welding agent consisting of tetrahydrofuran. The Examiner alleged that Peralt Anstalt teaches two polymeric planks with a bonding agent of tetrahydrofuran for connecting two sheets by temporarily dissolving and respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure. The Examiner took the position that it would have been obvious to provide Fricke [sic] et al. with a bonding agent of tetrahydrofuran in order to connect two sheets by temporarily dissolving and respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure as allegedly taught by Anstalt. For the following reasons, this rejection is respectfully traversed.

As discussed above, Park et al. explicitly teaches away from any bonding substance, and that this "teaching away" necessarily must include teaching away from any chemical welding agent. Moreover, the allegation by the Examiner that Peralt Anstalt teaches "two polymeric

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planks" has absolutely no basis in anything described in Peralt Anstalt, which relates to joining roofing plastic sheets. As thoroughly explained in Applicant's response of March 28, 2005, and in several previous responses, Peralt Anstalt is directed to plastic sheets that are used in roofing applications and that are joined in an overlapping configuration. Peralt Anstalt does not teach or suggest polymeric planks, and a person skilled in the art in considering the joining of polymeric flooring planks to form a floor surface covering would not look to methods of joining plastic sheeting in an overlapping manner to form roofing panels. Peralt Anstalt is non-analogous art. Further, overlapping is not the same as edge to edge joining. Also, it would be recognized that the forces and stresses to which a floor covering is subjected are not the same as the forces and stresses to which overlapping plastic sheet roofs would be subjected; therefore, the teachings of a suitable bonding material and method for joining together overlapping plastic sheets on a roof would not be relevant to joining polymeric flooring planks to form a floor surface covering. Accordingly, this rejection should be withdrawn.

**Rejection of claims 1 - 6 and 22 under 35 U.S.C. §103(a) over Fricke et al. in view of Peralt Anstalt**

At page 5 of the Office Action, the Examiner rejected claims 1 - 6 and 22 under 35 U.S.C. §103(a) as obvious over Fricke et al. (U.S. Patent No. 6,227,759) in view of Peralt Anstalt (GB 1,178,565). The Examiner alleged that Fricke et al. discloses a floor surface comprising two or more polymeric flooring planks having edges and connected by welding, but fails to disclose that the planks are connected to each other by chemical welding. The Examiner alleged that Peralt Anstalt teaches two polymeric planks with a bonding agent of tetrahydrofuran for

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connecting two sheets by temporarily dissolving and respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure. The Examiner took the position that it would have been obvious to provide Fricke et al. with a chemical welding agent for connecting two sheets by temporarily dissolving and respectively plasticizing the plastics material so that a connection similar to a welded connection is obtained under pressure. For the following reasons, this rejection is respectfully traversed.

As thoroughly explained in Applicants' response of March 28, 2005, a person skilled in the art would not be motivated to modify the teachings of Fricke et al. to provide planks joined by chemical welding. Fricke et al. relates to a plastic skating surface made up of large plastic sheets (32 feet by 8 feet in the preferred embodiment; see col. 2, line 48 of Fricke et al.). Fricke et al. states that the plastic sheets are held in place and held together because of their weight and that the welds (which, as discussed in Applicants' response of March 28, 2005, are not chemical welds) are useful primarily to provide surface continuity rather than for holding adjacent surfaces together (see col. 5, lines 44 - 50 of Fricke et al.). Therefore, a person skilled in the art who was seeking to bond polymeric flooring planks together to form a floor surface covering would not look to the teachings of Fricke et al. as being relevant to bonding the flooring planks to each other. Moreover, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Peralt Anstalt, which as discussed above, applies to joining overlapping plastic sheets that are used for roofing applications. In particular, overlapping is not the same as edge to edge joining. Peralt Anstalt is non-analogous art. Further, it would be recognized that the forces and stresses to which a floor covering is subjected are not the same as the forces and stresses to which overlapping plastic

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sheet roofs would be subjected; therefore, the teachings of a suitable bonding material and method for joining together overlapping plastic sheets on a roof would not be relevant to joining polymeric flooring planks to form a floor surface covering.

Moreover, Fricke et al. teaches away from the motivation alleged by the Examiner of providing Fricke et al. with a chemical welding agent of Peralt Anstalt in order to provide a connection similar to a welded connection obtained under pressure. Fricke et al., at col. 3, lines 59 - 62, describes as a desirable trait that its test rink can be disassembled easily. Accordingly, a firm, permanent welded connection provided by a chemical agent would not be a desired characteristic in the skating rink of Fricke et al. Accordingly, a person seeking to provide a skating ring that can be disassembled easily according to Fricke et al. would not look to the teachings of a chemical welding agent of Peralt Anstalt. Accordingly, this rejection should be withdrawn.

**Rejection of claims 19 - 20 under 35 U.S.C. §103(a) over Fricke et al. in view of Peralt Anstalt and in further view of Park et al.**

At page 6 of the Office Action, the Examiner rejected claim 19 - 20 under 35 U.S.C. §103(a) as being unpatentable over Fricke et al. in view of Peralt Anstalt and in further view of Park et al. The Examiner alleged that Fricke et al. in view of Peralt Anstalt discloses the floor surface as previously alleged by the Examiner. The Examiner acknowledged that Fricke et al. does not disclose splines located between at least a portion of polymeric planks. The Examiner alleged that Park et al. teaches a polymeric spline located between a portion of polymeric planks for the purpose of holding panels in precise vertical alignment. The Examiner took the position that it would have been obvious to provide Fricke et al. with splines located between at least a

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portion of the polymeric planks, wherein at least a portion of the planks and splines are connected to each other by chemical welding agent comprising at least one solvent that chemically welds at least the spline and plank together, wherein the chemical welding agent is applied to at least one of the edges of at least one of the individual planks in order to hold the panels in precise vertical alignment, as allegedly taught by Park et al. For the following reasons, this rejection is respectfully traversed.

As discussed above, and as thoroughly explained in Applicants' response of March 28, 2005, a person skilled in the art would not be motivated to modify the teachings of Fricke et al. to provide planks joined by chemical welding. Fricke et al. relates to a plastic skating surface made up of large plastic sheets (32 feet by 8 feet in the preferred embodiment; see col. 2, line 48 of Fricke et al.). Fricke et al. states that the plastic sheets are held in place and held together because of their weight and that the [non-chemical] welds are useful primarily to provide surface continuity rather than for holding adjacent surfaces together (see col. 5, lines 44 - 50 of Fricke et al.). Therefore, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Fricke et al. as being relevant to connecting the flooring planks to each other. Moreover, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Peralt Anstalt, which as discussed above, is non-analogous, and applies to joining overlapping plastic roofing sheets that are used for roofing applications. In particular, overlapping is not the same as edge to edge joining. Further, it would be recognized that the forces and stresses to which a floor covering is subjected are not the same as the forces and stresses to which overlapping plastic sheet roofs would be subjected; therefore, the teachings of a

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suitable bonding material and method for joining together overlapping plastic sheets on a roof would not be relevant to joining polymeric flooring planks to form a floor surface covering. Moreover, Fricke et al. teaches away from the motivation alleged by the Examiner of providing Fricke et al. with a chemical welding agent of Peralt Anstalt in order to provide a connection similar to a welded connection obtained under pressure. Fricke et al., at col. 3, lines 59 - 62, describes as a desirable trait that its test rink can be disassembled easily. Accordingly, a firm, permanent welded connection provided by a chemical agent would not be a desired characteristic in the skating rink of Fricke et al. Accordingly, a person seeking to provide a skating ring that can be disassembled easily according to Fricke et al. would not look to the teachings of a chemical welding agent of Peralt Anstalt. Therefore, for these reasons, the rejection should not stand.

Moreover, with regard to Park et al., it can be concluded that Fricke et al. teaches away from the use of splines to connect its plastic sheets. Fricke et al. explicitly teaches away from tongue-and-groove methods of joining surfaces (see, for example, col. 1, line 57 to col. 2, line 32). In particular, Fricke et al. discusses that these methods are unsuitable for its particular material and intended use because of warping and because of expenses of production and installation. Clearly, the same reasoning given by Fricke et al. in teaching away from the use of a tongue and groove method of joining surfaces for its particular material and intended use would be equally applicable in teaching away from the use of splines, which would have the same drawbacks with regard to the particular material and intended use of the material of Fricke et al. as does a tongue and groove connection. In particular, the use of splines in the particular material and intended use of Fricke et al. would be labor intensive and would not achieve the goal of Fricke et al. of providing a skating rink that can be installed and removed easily (see, for



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example, col. 2, lines 11 - 13 and col. 3, lines 59 - 62). Therefore, a person skilled in the art would not be motivated to use splines between the plastic sheets of Fricke et al. Accordingly, for this additional reason, this rejection should be withdrawn.

**Rejection of claim 23 under 35 U.S.C. § 103(a) over Fricke et al. in view of Peralt Anstalt in further view of Park et al.**

At page 7 of the Office Action, the Examiner rejected claim 23 under 35 U.S.C. § 103(a) as being unpatentable over Fricke et al. in view of Peralt Anstalt in further view of Park et al.

The Examiner alleged that Fricke et al. in view of Peralt Anstalt discloses the floor surface as previously alleged by the Examiner. The Examiner acknowledged that Fricke et al. does not disclose that a polymeric plank has a polymeric core with a laminate affixed on a surface of a core. The Examiner alleged that Park et al. teaches a polymeric flooring plank that has a polymeric core with a laminate affixed on the surface of the core for providing an improved composite structure with low friction properties. The Examiner took the position that it would have been obvious to provide Fricke et al. with a laminate affixed on the surface of a core in order to provide a composite structure presenting low friction properties that can be incorporated into a surface and provide high dimensional stability and durability. For the following reasons, this rejection is respectfully traversed.

As discussed above, and as thoroughly explained in Applicants' response of March 28, 2005, a person skilled in the art would not be motivated to modify the teachings of Fricke et al. to provide planks joined by chemical welding. Fricke et al. relates to a plastic skating surface made up of large plastic sheets (32 feet by 8 feet in the preferred embodiment; see col. 2, line 48 of

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Fricke et al.). Fricke et al. states that the plastic sheets are held in place and held together because of their weight and that the [non-chemical] welds are useful primarily to provide surface continuity rather than for holding adjacent surfaces together (see col. 5, lines 44 - 50 of Fricke et al.). Therefore, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Fricke et al. as being relevant to connecting the flooring planks to each other. Moreover, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Peralt Anstalt, which as discussed above, is non-analogous and applies to joining overlapping plastic roofing sheets that are used for roofing applications. In particular, overlapping is not the same as edge to edge joining. Further, it would be recognized that the forces and stresses to which a floor covering is subjected are not the same as the forces and stresses to which overlapping plastic sheet roofs would be subjected; therefore, the teachings of a suitable bonding material and method for joining together overlapping plastic sheets on a roof would not be relevant to joining polymeric flooring planks to form a floor surface covering. Moreover, Fricke et al. teaches away from the motivation alleged by the Examiner of providing Fricke et al. with a chemical welding agent of Peralt Anstalt in order to provide a connection similar to a welded connection obtained under pressure. Fricke et al., at col. 3, lines 59 - 62, describes as a desirable trait that its test rink can be disassembled easily. Accordingly, a firm, permanent welded connection provided by a chemical agent would not be a desired characteristic in the skating rink of Fricke et al. Accordingly, a person seeking to provide a skating ring that can be disassembled easily according to Fricke et al. would not look to the teachings of a chemical welding agent of Peralt Anstalt. Therefore, for these reasons alone, the rejection should not stand.

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Moreover, there is no logic to the Examiner's allegation that it would have been obvious to provide Fricke et al. with a laminate affixed to its surface according to the alleged teaching of Park et al. In particular, Fricke et al. relates to a plastic skating surface comprising plastic sheets welded together (but, as discussed above, does not teach or suggest chemical welding). Park et al. relates to a composite structure having a wooden or plastic foam core and a polymer layer adhesively attached to a planar face of the core, which provides a low friction surface for skating. Clearly, in Park et al., a polymer layer is necessary since a wooden or plastic foam core would not provide a low friction surface for skating. The material of the plastic sheets of Fricke et al., on the other hand, is polyethylene, which is one of the same materials described in Park et al. as being suitable and preferred for its polymer layer. Therefore, there would be absolutely no reason or motivation to modify the plastic sheet of Fricke et al. to add an additional plastic layer, since the plastic sheets of Fricke et al. already have the properties desired for a skating surface. Therefore, for this additional reason, the rejection should be withdrawn.

**Rejection of claim 27 under 35 U.S.C. § 103(a) over Fricke et al. in view of Peralt Anstalt and in further view of Andrews**

At page 8 of the Office Action, the Examiner rejected claim 27 under 35 U.S.C. § 103(a) as being unpatentable over Fricke et al. in view of Peralt Anstalt and in further view of Andrews et al. (U.S. Patent No. 2,495,680). The Examiner alleged that Fricke et al. in view of Peralt Anstalt discloses the floor surface as previously alleged by the Examiner. The Examiner acknowledged that Fricke et al. does not disclose a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank. The

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Examiner alleged that Andrews et al. teaches a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank for the purpose of developing a seam with strength equal to the strength of the plastic sheets. The Examiner took the position that it would have been obvious to provide Fricke et al. with a welding agent that comprises at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank in order to develop a seam with strength equal to the strength of the plastic sheets as allegedly taught by Andrews. For the following reasons, this rejection is respectfully traversed.

As discussed above, and as thoroughly explained in Applicants' response of March 28, 2005, a person skilled in the art would not be motivated to modify the teachings of Fricke et al. to provide planks joined by chemical welding. Fricke et al. relates to a plastic skating surface made up of large plastic sheets (32 feet by 8 feet in the preferred embodiment; see col. 2, line 48 of Fricke et al.). Fricke et al. states that the plastic sheets are held in place and held together because of their weight and that the [non-chemical] welds are useful primarily to provide surface continuity rather than for holding adjacent surfaces together (see col. 5, lines 44 - 50 of Fricke et al.). Therefore, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Fricke et al. as being relevant to connecting the flooring planks to each other. Moreover, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Peralt Anstalt, which as discussed above, is non-analogous and applies to joining overlapping plastic roofing sheets that are used for roofing applications. In particular, overlapping is not the same as edge to edge joining. Further, it would be recognized that the

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forces and stresses to which a floor covering is subjected are not the same as the forces and stresses to which overlapping plastic sheet roofs would be subjected; therefore, the teachings of a suitable bonding material and method for joining together overlapping plastic sheets on a roof would not be relevant to joining polymeric flooring planks to form a floor surface covering. Moreover, Fricke et al. teaches away from the motivation alleged by the Examiner of providing Fricke et al. with a chemical welding agent of Peralt Anstalt in order to provide a connection similar to a welded connection obtained under pressure. Fricke et al., at col. 3, lines 59 - 62, describes as a desirable trait that its test rink can be disassembled easily. Accordingly, a firm, permanent welded connection provided by a chemical agent would not be a desired characteristic in the skating rink of Fricke et al. Accordingly, a person seeking to provide a skating ring that can be disassembled easily according to Fricke et al. would not look to the teachings of a chemical welding agent of Peralt Anstalt. Therefore, for this reason alone, the rejection should not stand.

Moreover, a person skilled in the art who was seeking to join polymeric flooring planks to form a floor surface covering would not look to the teachings of Andrews et al., which relates to flexible plastic sheets for uses such as garments and receptacles and the like (see col. 1, line 3 of Andrews et al.). It would be recognized that the forces and stresses to which a floor covering is subjected are not the same as the forces and stresses to a flexible sheet used as a garment or receptacle; therefore, the teachings of a suitable bonding material and method for joining together overlapping flexible plastic sheets for a garment or receptacle would not be relevant to joining polymeric flooring planks to form a floor surface covering. Andrews et al. is non-analogous. Moreover, for the same reasons given with respect to Peralt Anstalt, Fricke et al. teaches away from the motivation alleged by the Examiner of providing Fricke et al. with a welding agent of Andrews

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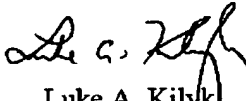
et al. in order to develop a seam with strength equal to the strength of the plastic sheets. Fricke et al. at col. 3, lines 59 - 62 describes as a desirable trait that its test rink can be disassembled easily. Accordingly, a welding agent that provides a seam with strength equal to the strength of plastic sheets would not be a desired characteristic in the skating rink of Fricke et al. Therefore, for this additional reason, the rejection should be withdrawn.

### CONCLUSION

In view of the foregoing remarks, the applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,

  
Luke A. Kilyk  
Reg. No. 33,251

Atty. Docket No. 3620-036-01  
KILYK & BOWERSOX, P.L.L.C.  
53 A East Lee Street  
Warrenton, VA 20186  
Tel.: (540) 428-1701  
Fax: (540) 428-1720